

## REMARKS

Applicant wishes to thank the Examiner for the detailed remarks. Claim 39 has been cancelled. Accordingly, claims 8, 10-16, 26, 28, 32-35, 37, 38, and 40-42 are pending.

### Specification

The Examiner has objected to the specification under 35 U.S.C. §132(a) with the suggestion that new matter has been disclosed. Applicant respectfully traverses this rejection. In the Response to Argument section, the Examiner argues that:

#### *Response to Arguments*

Applicant's arguments filed November 27, 2007 have been fully considered but they are not persuasive. Applicant's arguments are unsupported by evidence that one skilled in the art would know or be able to determine from the original specification and drawings that the spring creates a wave shape. With regard to applicant's argument that Figure 6 shows raised areas on both sides of the spring, the examiner disagrees. Even with improper crosshatching, there is no feature found in the drawing that could even remotely be considered or interpreted a raised area on the opposite side of the planar spring 38 from the single raised area shown in the originally filed drawings. A review of the original drawing compared with the replacement figure 6 filed on November 27, 2007, accompanied by the additional language in paragraph 0024 of the specification to define the "cylindrical beam spring" in response to the previous office action clearly shows the addition of raised areas the opposite side of the planar spring, not previously shown or discussed within the disclosure.

[2/11/2008 Office Action, p. 7].

The Examiner's argument that "one skilled in the art would know or be able to determine from the original specification and drawings that the spring crease a wave shape" is specifically refuted by Applicant's original paragraph 24 reproduced below:

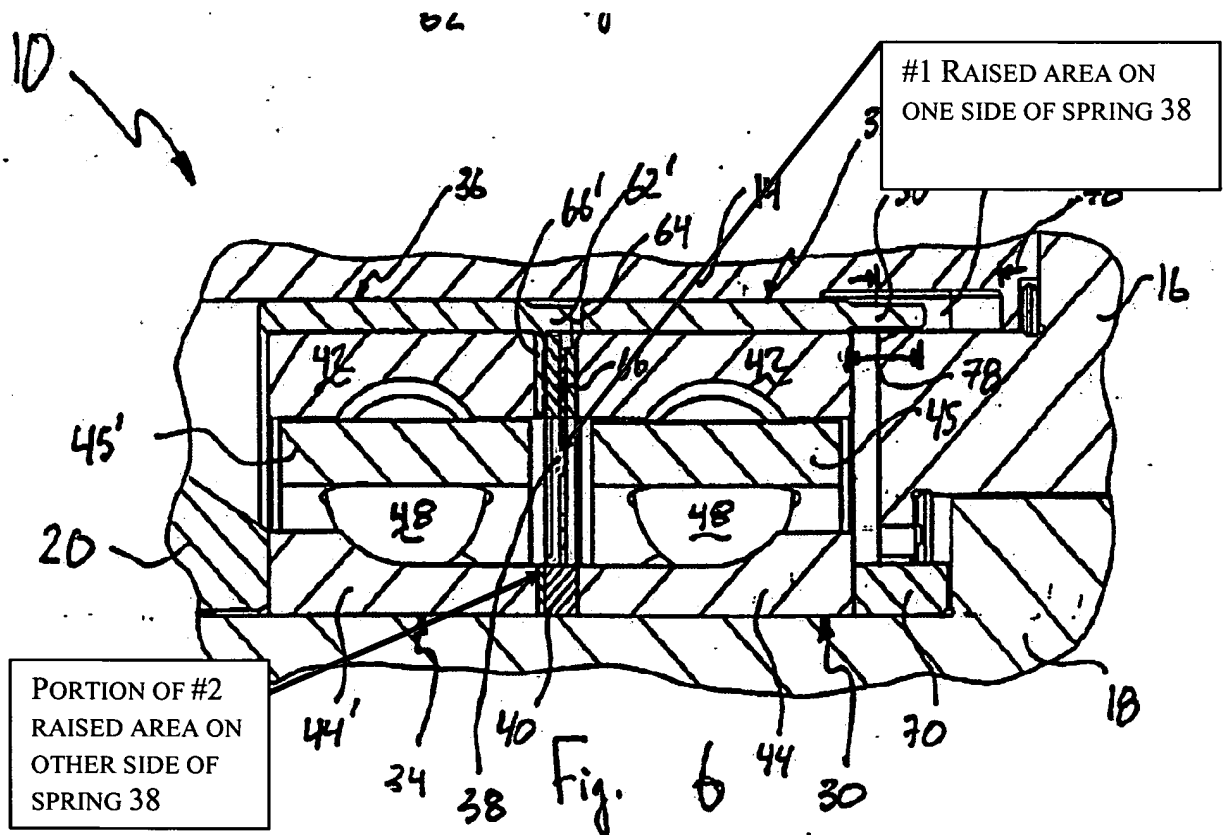
[0024] Returning to Figure 2, in the particular example provided the spring 38 is a cylindrical beam spring. compression of the spring 38 creates a wave shape and preloads the outer races 42 of the first and second bearings 30, 34 in the direction of axis A-A. Alternatively, other biasing members may be used for the spring 38 such as a Belleville spring.

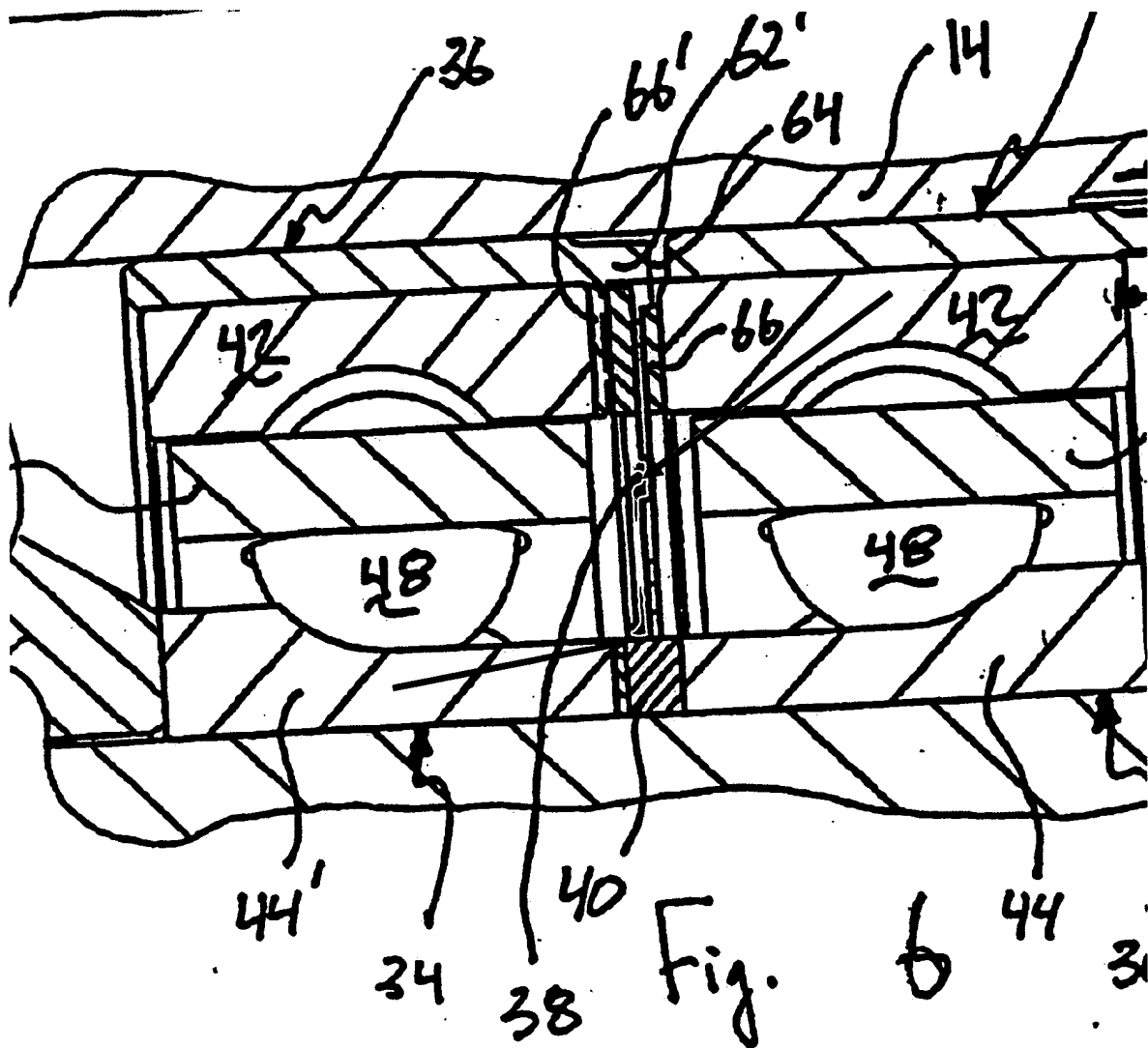
There can be no question that Applicant originally disclosed that compression of the spring 38 creates a wave shape. Thus, the only question at issue is what creates the wave shape

under compression. Applicant respectfully submits that a spring with the raised areas on both sides will create a wave shape. The Examiner then further argues that:

Even with improper cross-hatching, there is no feature found in the drawing that could even remotely be considered or interpreted a raised area on the opposite side of the planar spring 38 from the single raised area shown in the original filed drawings.

Applicant respectfully disagrees. As illustrated in the highlighted section and expanded highlighted section reproduced below, there is a portion of a raised area located at the lower portion of spring 38 which faces towards the left of the page [PORTION OF #2 RAISED AREA ON OTHER SIDE OF SPRING 38]. Applicant concedes that the cross-hatching as originally provided may not have been exactly correct, however, this is of no consequence as there is a raised area shown facing to the right of the page [#1 RAISED AREA ON ONE SIDE OF SPRING 38] and there is a portion of a raised area on the opposite side of the spring 38 [PORTION OF #2 RAISED AREA ON OTHER SIDE OF SPRING 38] as reproduced below.





Applicant respectfully submits that one skilled in the relevant art would understand that a “planar” spring such as a cylindrical beam spring or Belleville washer would be reasonably interpreted as a planar spring as opposed to a coil spring. Furthermore, Applicant has shown in the drawings above that raised areas are shown on both sides of the planar spring. Also, the unquestioned original disclosure which recites a “wave shape” provides dispositive evidence showing that Applicant had possession of the knowledge of raised portions on opposing sides of a planar spring that are offset from each other to provide a wave shape. Applicant respectfully requests reconsideration of this new matter rejection as well as the 35 U.S.C. §112 rejections.

## **Claim Objections**

Claim 39 has been cancelled in this response, while claim 29 was previously cancelled in the response of November 27, 2007.

## **35 U.S.C. §112**

Claims 13-15, 26-29 and 32-41 were rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. As discussed above, Applicant's argument overcomes this rejection.

Furthermore, Applicant has herein recited only a Belleville washer as a Belleville washer has a slight conical shape which gives the washer a spring characteristic as recited in the definitions below which were originally presented in Applicant's response to the April 19, 2007 Office Action.

A Belleville spring is defined as:

Disc springs are conical shaped washers, designed to be loaded in the axial direction F only. They can be statically loaded, either continuously or intermittently, or cyclically deflected i.e. dynamically loaded.

<http://www.bellevillesprings.com/disc-springs.html>

A **Belleville washer**, also known as a cupped spring washer, is a type of non-flat washer. It has a slight conical shape which gives the washer a spring characteristic. Belleville washers are typically used as springs, or to apply a pre-load or flexible quality to a bolted joint.

[http://en.wikipedia.org/wiki/Belleville\\_spring](http://en.wikipedia.org/wiki/Belleville_spring)

each of which utilize the term washer which is synonymous with planar.

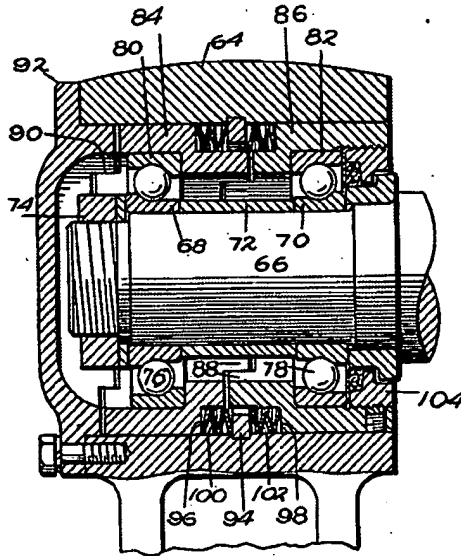
The above is in contrast to a coil spring which is defined as:

A **Coil spring**, also known as a *helical spring*, is a mechanical device, which is typically used to store energy and subsequently release it, to absorb shock, or to maintain a force between contacting surfaces. They are made of an elastic material formed into the shape of a helix which returns to its natural length when unloaded.

[http://en.wikipedia.org/wiki/Coil\\_spring](http://en.wikipedia.org/wiki/Coil_spring)

**35 U.S.C. §102(b)**

Claims 8, 10-16, 26, 32-35, and 37-42 are rejected under 35 U.S.C. §102(b) as being anticipated by *Baninger* (1,851,561). Applicant respectfully traverses this rejection. *Baninger* locates two springs within the casing or journal box 64 to interact with one of the bearing cups 86 or 84 and a ring 94.



**Fig. 3.**

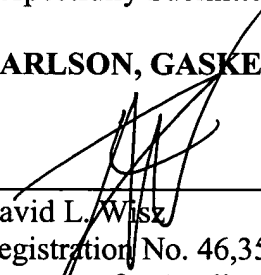
Each *Baninger* spring 100 or 102 interacts with one bearing cup and the ring 94, not **both** of the bearings as recited in Applicant's claims.

Furthermore, the springs of *Baninger* do not define a wave shape under preload as recited in Applicant's claims 13, 26, and 33. In fact, the *Baninger* spring will become flat under axial preload. These claims are also therefore properly allowable for this reason in addition to the reasons discussed above.

It is believed that this application is in condition for allowance. If any fees or extensions of time are required, please charge to Deposit Account No. 21-0279. Applicant's representative can be contacted at the number indicated below.

Respectfully Submitted,

**CARLSON, GASKEY & OLDS, P.C.**



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Dated: April 10, 2008

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail, postage prepaid, in an envelope addressed to Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 10<sup>th</sup> day of April, 2008.



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Beth A. Beard